

Physics Lab

Complementary Course (S6–S7)



Learning physics like real researchers

This course runs continuously over S6 and S7. Over four semesters, students carry out four projects. They observe real physical phenomena, ask questions, test ideas and discuss their results. Physics is learned through practice, teamwork and curiosity.

Working together

Students work in small teams. They share ideas, divide tasks and help each other. Each project is discussed with the teacher and presented to the class, like in a real scientific community.

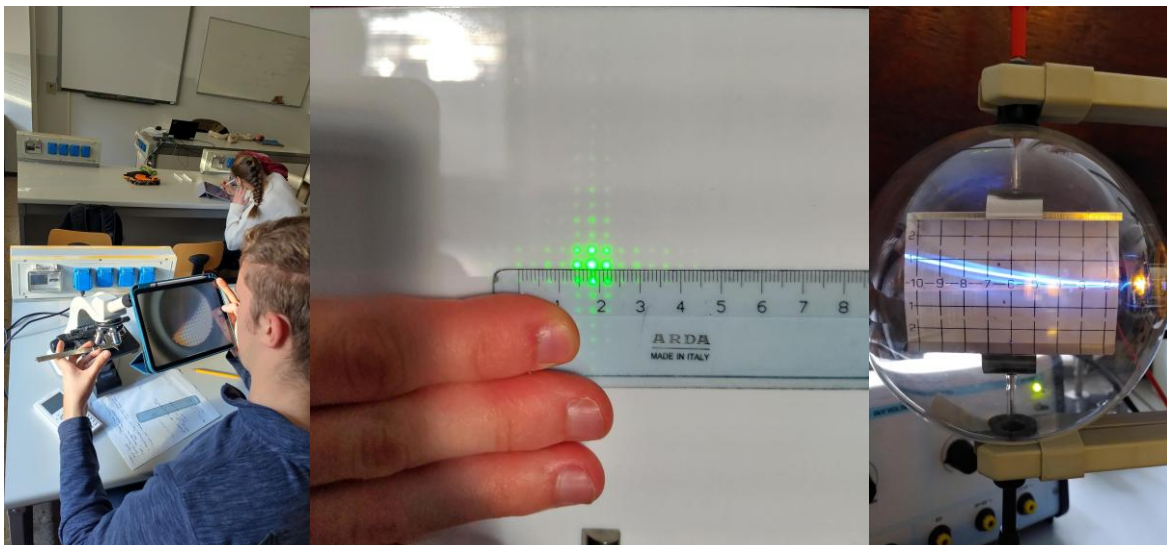


Free choice of topics

Students choose their own topics. Subjects can be very different from one group to another. The goal is to enjoy doing physics while staying fully connected to the S6 and S7 programme.

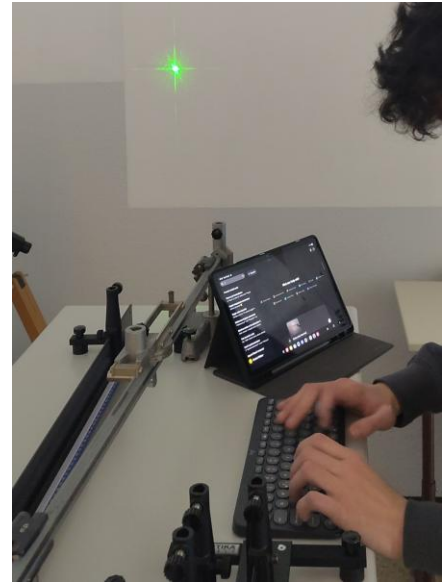
Different methods and materials

Depending on the project, students may use very simple equipment or more advanced experimental setups. There is no single way to do physics: methods are chosen to match the question being studied.



From theory to practice – and back

Experiments and theory always go together. Students compare measurements with models, analyse results and think about their meaning. Modern tools, including artificial intelligence, are discussed critically as part of today's scientific research.




Assessment

Your work is assessed in two ways. The A mark evaluates your work throughout the project, based on clear experimental goals.

The B mark is an oral presentation where you explain your results to the class.

How is the efficiency of a motor affected by the mass it is lifting?

Hypothesis: The efficiency will increase and decrease as we increase the mass, having a maximum point.


$$E_{pg} = mgh$$
$$\div \Delta t$$
$$P = mgv$$
$$n = \frac{P(\text{output})}{P(\text{input})}$$